WHAT IS CLAIMED IS:

1. A display, comprising:

a plurality of static pixel groups, each static pixel group of the plurality of static pixel groups comprising a plurality individual elements grouped in a predetermined manner similar or identical to other static pixel groups in the plurality of static pixel groups; and

a plurality of dynamic pixel groups, at least one dynamic pixel group of the plurality of dynamic pixel groups comprises a plurality of individual elements selected from at least two adjacently situated pixel groups of the plurality of static pixel groups,

wherein each one of the plurality of static pixel groups do not share individual elements from other individual static pixel groups, and

wherein the dynamically-generated dynamic pixel groups are superimposed over the static pixel groups subsequently in a predetermined sequence and manner vertically and/or horizontally, thus enabling an enhanced resolution in a vertical and/or a horizontal direction for a given resolution to be obtained for a given resolution for individual element addressed displays.

2. The display according to claim **1**, wherein each static pixel group of the plurality of static pixel groups includes individual elements having one of the colors red, green and blue.

3. The display according to claim **1**, wherein each dynamic pixel group of the plurality of dynamic pixel groups includes individual elements having one of the colors red, green and blue.

4. The display according to claim **1**, at least one static pixel group comprises a first group of a predetermined number of individual elements and at least one dynamic pixel group comprises a second group of the same predetermined number of individual elements, wherein the first and second groups include the same individual elements.

5. The display according to claim **1**, wherein each dynamic pixel group of the plurality of dynamic pixel groups comprises individual elements constituting another dynamic pixel group of the plurality of dynamic pixel groups.

6. The display according to claim **1**,

wherein each static pixel group and each dynamic pixel group having four individual elements each (quad pixel group) and

wherein the light emitting area and space of each quad pixel group as well as of its individual elements are preferable in the form of rectangle or square and

wherein the individual elements are aligned in straight lines in a matrix form.

7. The display according to claim **6**,

wherein the four individual elements in one pixel group having one of the colors red, green and blue and

wherein two of them having the same color.

8. The display according to claim **6**, at least one static pixel group comprises a first group of four individual elements and at least one dynamic pixel group comprises a second group of the same number of individual elements, wherein the first and second groups include the same individual elements.

9. The display according to claim **6**, wherein each dynamic pixel group of the plurality of dynamic pixel groups comprises individual elements constituting another dynamic pixel group of the plurality of dynamic pixel groups.

10. A display according to claim **6**, wherein the light emitting area and space of each individual element in a given static quad pixel group can be determined in such a way that the cross point of the four individual elements moves along the diagonal line of the pixel group to form at least two same color individual elements of equal light emitting area and space.

11. A display according to claim **7**, wherein the two individual elements of the same color share equally the data of the color data in a quad pixel group.

12. The display according to claim **1**,

wherein each static pixel group and each dynamic pixel group having three individual elements each and

wherein the individual elements are arranged in a mutually offset pattern and

wherein any three neighboring individual elements form an equilateral triangle (delta pixel group).

13. The display according to claim **12**, wherein the three individual elements in one pixel group having one of the colors red, green and blue.

14. The display according to claim **12**, at least one static pixel group comprises a first group of three individual elements and at least one dynamic pixel group comprises a second group of the same number of individual elements, wherein the first and second groups include the same individual elements.

15. The display according to claim **12**, wherein each dynamic pixel group of the plurality of dynamic pixel groups comprises individual elements constituting another dynamic pixel group of the plurality of dynamic pixel groups.

16. The display according to claim **1**, further comprising a control unit for controlling a luminous intensity of each individual element.

17. The display according to claim **1**, wherein the light emitting area and space of each individual element in a static pixel group can be adjusted and optimized in order to obtain a maximum luminance in white balance equilibrium.

18. A display according to claim **1**, wherein the determination of the light emitting area and space of each individual element in a static pixel group depends on the light emission performance of the individual element.

19. A display according to claim **1**, wherein the non light emitting area and space (black mask or black barrier ribs) contouring each individual element has the same structure.

20. A display according to claim **1**, wherein by adjusting the aperture ratio (the ratio of the light emitting area and space to the total display area and space or percentage of the effective display area in a display panel), optimized luminance and contrast can be obtained in finding an optimal ratio between the non light emitting area (black mask or black barrier ribs) and the light emitting area to an acceptable level for human eyes.

21. A method for controlling a display, comprising the steps of:

generating a plurality of static pixel groups, each static pixel group of the plurality of static pixel groups comprising a plurality individual elements grouped in a predetermined manner similar or identical to other static pixel groups in the plurality of static pixel groups; and

generating a plurality of dynamic pixel groups, at least one dynamic pixel group of the plurality of dynamic pixel groups comprises a plurality of individual elements selected at least from two adjacently situated pixel groups of the plurality of static pixel groups,

wherein each one of the plurality of static pixel groups do not share individual elements from other individual static pixel groups, and

wherein the dynamically-generated dynamic pixel groups are superimposed over the static pixel groups subsequently in a predetermined sequence and manner vertically and/or horizontally, thus enabling an enhanced resolution in a vertical and/or a horizontal direction for a given resolution to be obtained for a given resolution for individual element addressed displays.

22. The method according to claim **21**, wherein each static pixel group of the plurality of static pixel groups includes individual elements having one of the colors red, green and blue.

23. The method according to claim **21**, wherein each dynamic pixel group of the plurality of dynamic pixel groups includes individual elements having one of the colors red, green and blue.

24. The method according to claim **21**, wherein each dynamic pixel group of the plurality of dynamic pixel groups comprises individual elements constituting another dynamic pixel group of the plurality of dynamic pixel groups.

25. The method according to claim **21`**, at least one static pixel group comprises a first group of a predetermined number of individual elements and at least one dynamic

pixel group comprises a second group of the same predetermined number of individual elements, wherein the first and second groups include the same individual elements.

26. The method according to claim **21**, further comprising the step of controlling a luminous energy of each individual element.

27. The method according to claim **21,**

wherein the displaying of video data from a high resolution video source, preferable an HDTV source, can be done in generating different subsets of dynamic, downscaling video data screen layers comprising different dynamic pixel groups which are subsequently displayed and superimposed each other over a time frame on a low resolution display to create an enhanced high resolution screen, preferable an HDTV screen.

28. The method according to claim **21**,

wherein the upscaling of video data from a low resolution video source, like a SDTV source can be done in generating different subsets of dynamic video data screen layers comprising different dynamic pixel groups which are subsequently displayed and superimposed each other over a time frame on a low resolution display to create an enhanced high resolution screen, preferable an HDTV screen and

wherein the data of the additional created dynamic pixels groups in the subsequent screen layers can be computed according to different predetermined Digital Signal Processing and Predicting (DSPP) algorithms, preferably using MPEG video

data from the reference frame and target frames, in order to create sharper edges, fine details and better motion control of the original low resolution video source, like a SDTV source.

29. The method according to claim **21**, wherein the dynamic high resolution display enhanced mode, preferable in HDTV resolution, can be switched back to the original, low resolution static mode to display computer text, preferable in a progressive scan mode, thus creating a perfect HDTV enabled WebTV set for video and internet access.

30. A display, comprising:

first pixels each including a plurality of dots grouped in a predetermined manner, wherein each group of dots grouped in a predetermined manner is formed similarly or identically; and

second pixels variably and dynamically generated from dots forming the first pixel groups, at least one second pixel includes a plurality of dots selected from at least two adjacently situated first pixels,

wherein each first pixel does not share common dots, and

wherein the dynamically-generated second pixels are superimposed over the first pixels subsequently in a predetermined sequence and manner vertically and/or horizontally, thus enabling an enhanced resolution in a vertical and/or a horizontal direction for a given resolution to be obtained for a given resolution for dot addressed displays.

31. A method for controlling a quad pixels display of a static resolution X/2 x Y/2, comprising the steps of:

generating a plurality of first pixel groups, each first pixel group of the plurality of first pixel groups comprising 4 dots having one of the colors red, green and blue grouped in a predetermined manner, wherein each group of dots grouped in a predetermined manner is formed similarly or identically;

generating a plurality of second pixel groups, at least one second pixel group of the plurality of second pixel groups includes 4 dots selected from at least two adjacently situated first pixels,

wherein each first pixel does not share common dots,

wherein the total RGB pixel data of a conventional RGB stripe pixels display of a resolution (X-1) x (Y-1) is distributed into 4 frames of the quad pixels display of a static resolution X/2 x Y/2

wherein P(i,j) represents the RGB stripe pixel at the position of i in the horizontal X axis and j in the vertical Y axis of the conventional RGB stripe display

wherein QP(i,j) represents the quad pixel of the corresponding quad pixels display at the position of i in the horizontal X axis and j in the vertical Y axis

wherein MD(i,j) represents the main dot at the upper left quadrant of the quad pixel QP(i,j)

wherein the quad pixels from one of the 4 frames of the quad pixels display are formed using the RGB value of the corresponding RGB stripe pixels of the conventional display

$QP(i,j) = P(i,j)$ $\quad i = 1$ to $(X-1)$ step 2

j = 1 to (Y-1) step 2

wherein the quad pixels from one of the 4 frames of the quad pixels display are formed using the RGB value of the corresponding RGB stripe pixels of the conventional display

QP(i,j) = P(i,j) i = 2 to (X-1) step 2

j = 1 to (Y-1) step 2

wherein the quad pixels from one of the 4 frames of the quad pixels display are formed using the RGB value of the corresponding RGB stripe pixels of the conventional display

QP(i,j) = P(i,j) i = 1 to (X-1) step 2

j = 2 to (Y-1) step 2

wherein the quad pixels from one of the 4 frames of the quad pixels display are formed using the RGB value of the corresponding RGB stripe pixels of the conventional display

QP(i,j) = P(i,j) i = 2 to (X-1) step 2

j = 2 to (Y-1) step 2.

32. The method according to claim **31**,

wherein a weighted dot rendering method is used

for each frame of the 4 frames of the quad pixels display to leverage the energy at the main dot MD(i,j) of a quad pixel QP(i,j) by multiplying a same value between 25% to 85% to the value of MD(i,j) of each of the 4 frames while the weight attributed to each

of the rest 3 dots in the quad pixel is equal to [100% - (the weight value chosen for MD(i,j))] divided by 3.

33. The method according to claim **31**,

wherein a viewing perception of a high resolution (X-1) x (Y-1) image at the quad pixels display of a low static resolution X/2 x Y/2 can be obtained by adding all the weighted value of each dot from the 4 frames of the quad pixel display alltogether to be presented on the quad pixels display in the form of red, green, and blue light intensity.

34. The method according to claim **31**,

wherein the weight attributed to the main dots MD(i,j) in each of the 4 frames can be set with different values between 25% and 85% in order to re-calibrate the white balance of the quad pixels display after a color shifting due to the different decreases of light intensity of each primary color over the time.